

ABSTRACT OF THE DISCLOSURE

A proton conductive membrane according to the invention includes layered clay mineral powder which is a cation exchanger or an anion exchanger, and a crosslinking structure including an $\text{-O-SO}_2\text{-O-}$ group which crosslinks particles of the layered clay mineral powder. The proton conductive membrane may be obtained by applying a modifying agent which contains one or more compounds selected from the group consisting of sulfuric acid and metal sulfates, to the layered clay mineral powder, each particle of the layered clay mineral powder having an acid site on a surface thereof. Thus, a phosphoric acid-derived compound which crosslinks the particles of the layered clay mineral powder is replaced by the sulfuric acid which is a stronger acid, whereby the proton conducting ability of the proton conductive membrane can be improved.